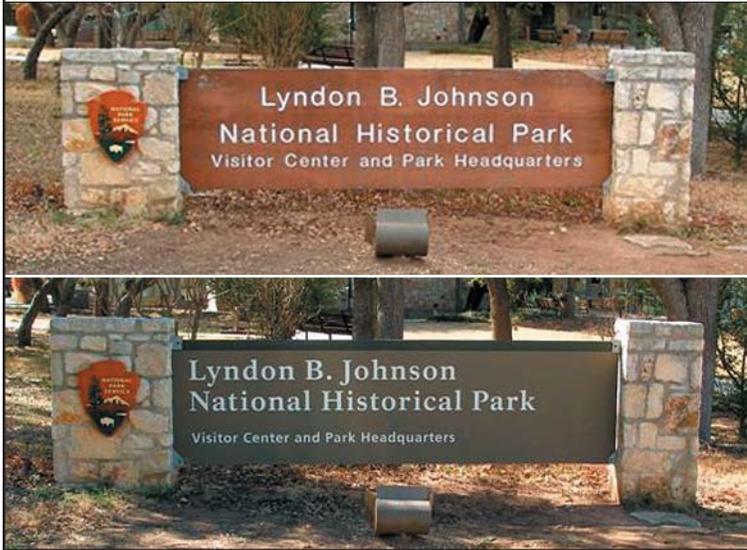




# HFC *on* MEDIA

March / April | 2006

Issue 11



*Typography that is distinctive, easy to read, and used consistently is an important component of NPS graphic identity. One of several new signs at Lyndon B. Johnson NHP (pictured here with the one it replaces above) shows how NPS standard typefaces (Frutiger and NPS Rawlinson) can be used to identify an important park facility.*

## In This Issue

- 2 Introducing OpenType Fonts
  - 3 Why Frutiger & NPS Rawlinson
  - 5 Sharing Frutiger & NPS Rawlinson
  - 6 The NPS Uniform Collection
- Call for Career Collections

## From the Director

Like our colleagues across the Service, Harpers Ferry Center has been challenged by tight budgets and a smaller staff. One way we have dealt with this situation is to provide park and program staff with better tools and timely training to meet their own interpretive media needs. The National Park Service Graphic Identity Program, managed by the HFC Office of NPS Identity, is an excellent example of a service we continue to provide to the Park Service community. Launched in 2001, the program has developed graphic standards that help establish a unique organizational identity expressed through the full range of communication materials used by the National Park Service. Today, this program is expressed through such diverse media as park publications, news releases, wayside exhibits, websites, audiovisual programs, and even highway signs. In this issue of **HFC onMEDIA**, we announce the release of new OpenType® versions of the NPS typefaces Adobe Frutiger and NPS Rawlinson—key components of the NPS Graphic Identity Program. These typefaces represent our best efforts to continue providing up-to-date tools for the everyday work we all do in communicating our programs, services, and essential mission.

# Introducing OpenType Fonts

## The Next Level of Digital Typography

**NPS employees who produce newsletters, news releases, rack cards, reports, site bulletins, and other forms of print communications and interpretive media have probably used the NPS-approved typefaces Adobe Frutiger and NPS Rawlinson.**

These typefaces, selected by the HFC Office of NPS Identity in 2001, have been widely used and distributed across the National Park Service community (*see sidebar Why Frutiger and NPS Rawlinson, page 3*). They are an integral part of graphic design standards proscribed in Director's Order 52A to bring a consistent look to our public communications.

### The Trouble with PostScript

The adoption of these typefaces, unfortunately, was accompanied by a variety of technical problems. The approved versions of Adobe Frutiger and NPS Rawlinson were PostScript Type 1 fonts, a standard recognized by the professional desktop publishing community and commercial printing industry—including most HFC IDIQ contractors and GPO print vendors. However in 2001, many NPS offices lacked desktop laser printers that supported the PostScript page description language. GIS staff and NPS sign shops also reported that their core software applications recognized TrueType Fonts—a competing and widely distributed alternative to Type 1 developed by Microsoft—but not PostScript.

The landscape for digital typography has thankfully improved over the past five years. GIS applications now recognize PostScript Type 1 fonts. Windows-PC printer drivers translate PostScript as fluently as TrueType. Even Microsoft's own office applications treat PostScript and TrueType fonts alike. Still, many NPS users across the country—including the designers at Harpers Ferry Center—saw room for improvement. “Bugs” in the display of NPS Rawlinson fonts emerged as Windows 2000 and Windows XP were adopted across the Service (*see figure 1 below*). Type selection menus in the new Adobe Creative Suite applications (Illustrator CS, InDesign CS, and Photoshop CS) wouldn't display all the NPS Rawlinson font variants properly. Files shared between MacOS and Windows-PC computers periodically resulted in font matching errors. And choosing when to use old style numbers and tabular numbers added typographic confusion to many workflows.

### Introducing OpenType

Anyone working in the world of graphic design and print has most likely heard of

HFC *on*MEDIA is produced and published by Harpers Ferry Center. Statements of facts and views are the responsibility of the authors and do not necessarily reflect an opinion or an endorsement by the National Park Service. Mention of trade names or commercial products does not necessarily constitute recommendation for use by the National Park Service.

Send questions and comments to Gary Candelaria either by email at [gary\\_candelaria@nps.gov](mailto:gary_candelaria@nps.gov) or call 304 535 6058.

**Secretary of the Interior**  
Gale A. Norton

**Director,**  
**National Park Service**  
Fran P. Mainella

**Associate Director,**  
**Partnerships, Interpretation**  
**and Education, Volunteers,**  
**and Outdoor Recreation**  
Chris Jarvi

**Director,**  
**Harpers Ferry Center**  
Gary Candelaria

**Editor**  
David T. Gilbert

**Art Director**  
Robert Clark,  
Office of NPS Identity

**Designer**  
David T. Gilbert

**Contributors**  
Chad Beale  
Sylvia Frye  
Jane Merritt  
Mark Muse  
Phil Musselwhite  
Tom Patterson

NPS Rawlinson Book [NPSRawlinson]  
Develop a service-wide database that is up-to-date.  
This is an en dash – and — em dash ( – — )  
0123456789 On April 18, 1785 \$16.32

*Figure 1. Among the problems with the PostScript Type 1 versions of NPS Rawlinson were too much spacing after a dash in a sentence, a height difference between an “en” dash and an “em” dash, and an oldstyle 1 that looked more like the capital letter “I”. These problems have all been addressed in the new OpenType versions of NPS Rawlinson.*

The National Park Service cares for special places saved by the American people so that all may experience our heritage.

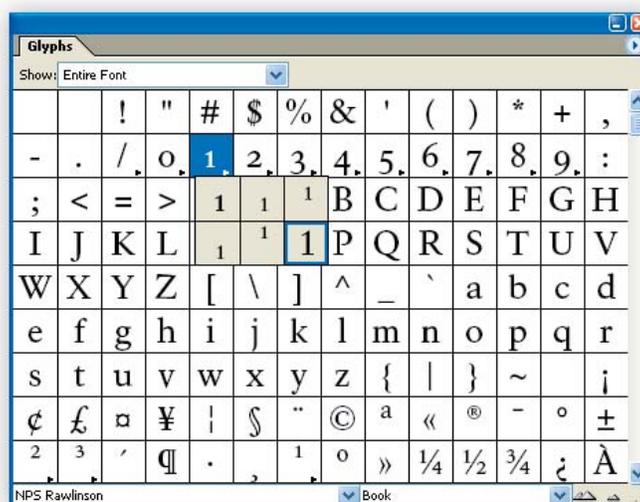
EXPERIENCE YOUR AMERICA™

OpenType. OpenType isn't really a new font format, but rather a hybrid of existing formats. Developed jointly by Microsoft and Adobe, it combines the outline, metric, and bitmap data in Adobe's PostScript Type 1 format with Microsoft's TrueType format to form one compact font file. The two main benefits of the OpenType format are its cross-platform compatibility (the same font file works on MacOS and Windows-PC computers), and its ability to support widely expanded character sets and layout features, which provide richer linguistic support and advanced typographic control.

Based on Unicode—an international multi-byte character encoding that covers virtually all of the world's languages—OpenType fonts can make multilingual typography easier by including multiple language character sets in one font. Unicode supports up to 65,000 glyphs in a single font file (a glyph is a visual representation of a character). By comparison, a typical PostScript Type 1 font comprised of ISO-Latin encodings used in the West is limited to 256 glyphs.

In OpenType, a letter or number may be represented by more than one character, or glyph. The numeral "1", for instance, might be displayed as a tabular character ( 1 ), an old style character ( 1 ), a numerator for a fraction ( ½ ), or a superscript character ( ¹ ) (see figure 2). These extended characters are typically accessed from the Symbols palette in Microsoft Word or from the Glyphs palette in Adobe InDesign CS.

**Figure 2.** The Glyphs palette in Adobe InDesign allows users to visually access the entire character set for NPS Rawlinson OT. Here, available alternates for the number 1 appear as a pop-up box by clicking and holding down the mouse.



## OpenType Frutiger and NPS Rawlinson

In the fall of 2005, Harpers Ferry Center decided to embrace OpenType. A workgroup comprised of HFC managers, visual information specialists, information technology specialists, and contract specialists revised the NPS licensing agreement for Adobe Frutiger to include the OpenType version of this font. James Montalbano, the original creator of Rawlinson, was contracted to revise and convert NPS Rawlinson to OpenType. After extensive testing on Windows-PC and MacOS computers in January and February 2006, these new typefaces have finally been made available Servicewide. (See sidebar *Sharing Frutiger and NPS Rawlinson*, page 5, for download information and use restrictions).

The OpenType version of Adobe Frutiger is comprised of virtually the same character set as the PostScript Type 1 version. Although it lacks the rich extended glyphs that Unicode encoding makes possible, it has the major advantage of cross-platform portability. Best of all, the National Park Service incurs no cost for upgrading from the PostScript to OpenType version of Adobe Frutiger: if an NPS user who already has Adobe Frutiger downloads the OpenType version, it still counts as one user license.

## Why Frutiger and NPS Rawlinson?

In 2000, a team drawn from the National Park Service, National Park Foundation, and Ogilvy Public Relations found that among the barriers to a greater public understanding of the breadth and depth of our agency was a lack of consistency in the content and appearance of visual materials presented to the public. Consequently, Harpers Ferry Center was tasked to develop graphic standards that would establish a unique organizational identity that could be expressed through the full range of communication materials used by the National Park Service.

A clear and strong graphic identity for an organization is achieved through a careful mix of visual elements. These typically include a logo (the Arrowhead), a limited palette of colors, a limited set of typefaces (usually a serif and sans serif typeface), and a number of distinctive graphic devices (like the black band), all carefully orchestrated to achieve a distinctive look. None of these elements alone can create a strong identity. But when used together, the combination serves to create a visual impression (both consciously and subconsciously) that is unique to that organization.

Typography is one important way to bind together such disparate media as printed materials, films and videos, indoor and outdoor exhibits, vehicle markings, uniforms, and signs. Road signs, for instance, are one of the most pervasive ways the Park Service communicates with park visitors. Finding typefaces that work effectively in all of these media types was no easy task. A team of HFC designers, working with Meeker & Associates (a leading environmental graphic design firm), the Dennis Konetzka Design Group, Federal Highway Administration, and

*continued on next page*

The real benefits of OpenType show up in the new versions of NPS Rawlinson. Taking advantage of the font's extended range of characters, the typeface has been reorganized into three families: NPS Rawlinson OT, NPS Rawlinson OT Oldstyle, and NPS Rawlinson OT Condensed (see figure 3 below for a complete list of font names). Notable features of the NPS Rawlinson OT fonts include:

- Standard tabular style numbers (1, 2, 3, 4, 5, 6, etc.) are now available by default in NPS Rawlinson OT, while the old style numbers (1, 2, 3, 4, 5, 6, etc.) are available in NPS Rawlinson OT Oldstyle. However, you can still access the old style numbers as glyphs in NPS Rawlinson OT and NPS Rawlinson OT Condensed. Old style numbers, which are drawn with ascenders extending above a text baseline ( 6 ) and descenders extending below a text baseline ( 9 ), are designed

to blend in visually with a line or block of text. Tabular style numbers are best suited for use in tables, charts, and other applications where the quantitative display of numbers is important.

- The oldstyle numeral 1 has been redesigned (it no longer looks like the Roman Numeral I). The height of the number relative to the text baseline remains unchanged.
- Each font includes extended sets of fractions ( ¼, ½, ¾, etc. )
- Each font includes custom ligatures ( ff, fi, fl, ffi, and ffl ).
- Each font includes Hawaiian diacritical glyphs (Pu'u Koholā Heiau).

### OpenType Aware and Non-Aware Applications

It's important to note that not all Windows-PC applications access OpenType fonts the same way. Applications like Microsoft Word, Microsoft Excel, FileMaker

*Continued from previous page*

Pennsylvania Traffic Institute at Penn State University, looked at a variety of typefaces to satisfy the broad needs of the National Park Service.

The team finally settled on two typefaces: Adobe Frutiger and NPS Rawlinson. Frutiger is a sans serif typeface developed in 1968 by Adrian Frutiger for signage at the Charles de Gaulle Airport outside Paris. In contrast to Helvetica (or its Microsoft Windows counterpart Arial), Frutiger is characterized by "open" letterforms, which means, for example, that there is less chance for confusion between a "c", an "e" or an "o" on a small map or brochure, or on a road sign viewed from a distance.

NPS Rawlinson is a serif typeface developed by James Montalbano of Terminal Design. Because Rawlinson was designed with a larger x-height—the size of lower-case letters relative to adjacent upper-case letters—it too works well in both very small and very large sizes. Testing at the Pennsylvania Traffic Institute, which included both day and night driving conditions with both younger and older drivers, found that NPS Rawlinson was more legible than Clarendon or Highway Gothic—the only previous typefaces approved for use on highway signs by FHWA.

The design team found that, in addition to the functional advantage of improved legibility, the distinctive letterforms of both Frutiger and NPS Rawlinson set them apart visually from the more common typeface varieties found on typical office computers. This distinctiveness, when applied across the many forms of media used by the NPS, contributed subtly but effectively to the team's overall goal to "establish a unique organizational identity that could be expressed through the full range of communication materials used by the National Park Service."

**Figure 3.** Adobe Creative Suite (CS) applications display these OpenType font names:

NPS Rawlinson OT - Book  
 NPS Rawlinson OT - *Book Italic*  
 NPS Rawlinson OT - Medium  
 NPS Rawlinson OT - *Medium Italic*  
 NPS Rawlinson OT - **Bold**  
 NPS Rawlinson OT - ***Bold Italic***  
 NPS Rawlinson OT - **Heavy**  
 NPS Rawlinson OT - ***Heavy Italic***

NPS Rawlinson OT Oldstyle - Book  
 NPS Rawlinson OT Oldstyle - *Book Italic*  
 NPS Rawlinson OT Oldstyle - Medium  
 NPS Rawlinson OT Oldstyle - *Medium Italic*  
 NPS Rawlinson OT Oldstyle - **Bold**  
 NPS Rawlinson OT Oldstyle - ***Bold Italic***  
 NPS Rawlinson OT Oldstyle - **Heavy**  
 NPS Rawlinson OT Oldstyle - ***Heavy Italic***

NPS Rawlinson OT Condensed - Book  
 NPS Rawlinson OT Condensed - *Book Italic*  
 NPS Rawlinson OT Condensed - Medium  
 NPS Rawlinson OT Condensed - *Medium Italic*  
 NPS Rawlinson OT Condensed - **Bold**  
 NPS Rawlinson OT Condensed - ***Bold Italic***  
 NPS Rawlinson OT Condensed - **Heavy**  
 NPS Rawlinson OT Condensed - ***Heavy Italic***

Adobe PageMaker, Microsoft Word, and other MS Office applications display these font names:

NPSRawlinsonOT  
 NPSRawlinsonOT - *italic*  
 NPSRawlinsonOTTwo  
 NPSRawlinsonOTTwo - *italic*  
 NPSRawlinsonOT - **bold**  
 NPSRawlinsonOT - ***bold italic***  
 NPSRawlinsonOTTwo - **bold**  
 NPSRawlinsonOTTwo - ***bold italic***

NPSRawlinsonOTOld  
 NPSRawlinsonOTOld - *italic*  
 NPSRawlinsonOTTwoOld  
 NPSRawlinsonOTTwoOld - *italic*  
 NPSRawlinsonOTOld - **bold**  
 NPSRawlinsonOTOld - ***bold italic***  
 NPSRawlinsonOTTwoOld - **bold**  
 NPSRawlinsonOTTwoOld - ***bold italic***

NPSRawlinsonOTCn  
 NPSRawlinsonOTCn - *italic*  
 NPSRawlinsonOTTwoCn  
 NPSRawlinsonOTTwoCn - *italic*  
 NPSRawlinsonOTCn - **bold**  
 NPSRawlinsonOTCn - ***bold italic***  
 NPSRawlinsonOTTwoCn - **bold**  
 NPSRawlinsonOTTwoCn - ***bold italic***



er Pro, and Macromedia Freehand only recognize four variants of any one font (regular, *italic*, **bold**, and **bold italic**). This is a limitation imposed by the Windows XP operating system (and by Windows 98 and Windows 2000 before it). Adobe Frutiger, however, has nine variants, while each version of NPS Rawlinson has six variants. So, for instance, if you want to format a headline in **NPS Rawlinson Heavy**, you won't find this font name in your Microsoft Word formatting toolbar or character dialog box. Instead, you'll have to select NPSRawlinsonTwo and then format it in Bold (see figure 3 on the previous page). The good news is that the OpenType font you select will appear and print just fine.

OpenType aware applications like Adobe InDesign CS, on the other hand, bypass the limitations of the Windows operating system and expose the full power of OpenType, offering rich linguistic support, advanced typographic control, and full cross-platform compatibility. Selecting the correct font is much more intuitive,

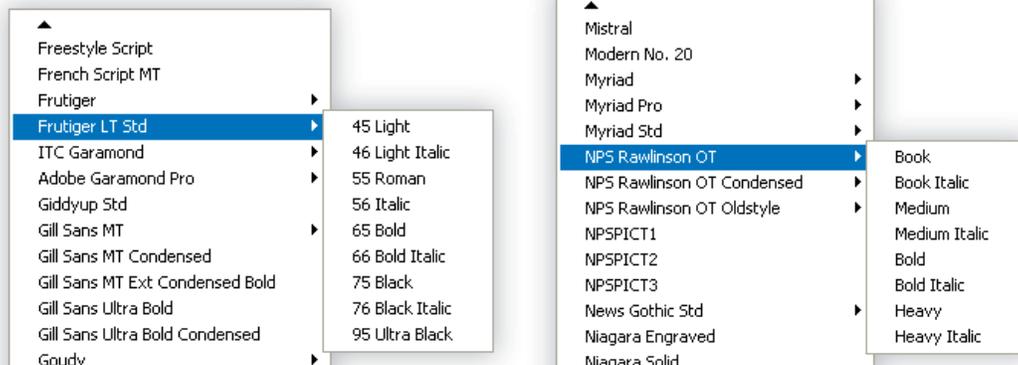
and the Glyphs palette provides access to the full range of extended characters (see figure 4 below).

### The Benefits of OpenType

How beneficial will OpenType be to the average Park Service user? Many users may not need enhanced foreign language support or access to special characters used in enhanced typographic applications. Nor will OpenType make every NPS user an expert typesetter. Nevertheless, OpenType does offer cross-platform fonts, plus access to many new typographic features now and in the future. As Microsoft and other software companies build support for OpenType into their next generation of products, all Park Service users should benefit.

*To download the new OpenType fonts, go to the NPS Graphic Identity Program website at [www.graphics.nps.gov](http://www.graphics.nps.gov).*

*Figure 4. Simple font selection menus in the Adobe Creative Suite (CS) product line provide quick access to multiple OpenType variants.*



### Sharing Frutiger and NPS Rawlinson

NPS users can download Adobe Frutiger and NPS Rawlinson from the NPS Graphic Identity Program website at [www.graphics.nps.gov](http://www.graphics.nps.gov). These font files are furnished in ZIP compressed format, and complete download and installations instructions are available on the website.

This website is only available to computers on the National Park Service network—contractors, vendors, and most partners cannot access it. You may share these font files on disk or via email attachment, but only in accordance with the licensing requirements described below.

**NPS Rawlinson.** You may furnish copies of NPS Rawlinson to anyone who is using this typeface for *NPS-related business*. Contractors, vendors, partners, and others are *not* authorized to use NPS Rawlinson for non-NPS work.

**Adobe Frutiger.** Frutiger is licensed only to NPS employees working on NPS computers. You may *not* copy or share Adobe Frutiger with contractors, vendors, partners, or others unless they already own a license for this font (for example, they have a MacOS version but not a Windows-PC version, or a PostScript Type 1 version but not an OpenType version).

Following standard industry practice, if a contractor, vendor, or partner do not own a valid license for Adobe Frutiger, they must purchase their own copy. This is also true with files you furnish to GPO for commercial printing. To ensure compliance with this licensing requirement, make sure you list the Adobe Frutiger fonts you are using when you draw up your GPO contract paperwork, and always add a line reminding the competing vendors of their legal responsibility to have a valid license should they win the contract award.

# The NPS Uniform Collection

*Preserving powerful symbols of tradition and pride*

Thanks to sentimentalists or “packrats,” Harpers Ferry Center has been collecting photographs, documents, books, uniforms, accoutrements, and other NPS memorabilia for over 35 years. Former Director George Hartzog established the National Park Service History Collection at HFC in 1971 for the purpose of preserving the history and culture of the NPS. Hartzog’s goal was to some day open a museum of National Park Service history in Washington, D.C.

The history collection documents the evolutionary history and material culture of the National Park Service, forming the most complete record of NPS history available. The ranger uniform, its insignia, and accessories are one of the history collections’ many components critical to the complete understanding and portrayal of the NPS and its role in the history of the United States. Other key components of the collection are the NPS Historic

Photograph Collection and several NPS archival collections (see “A Window into Our Past,” *July/August 2005 HFC onMedia*, page 7).

The uniform collection, which dates back to the agency’s establishment in 1916, spans the entire 20<sup>th</sup> century. Maintained by HFC Museum Curator Sylvia Frye, it is the largest and most complete uniform collection in the National Park Service,

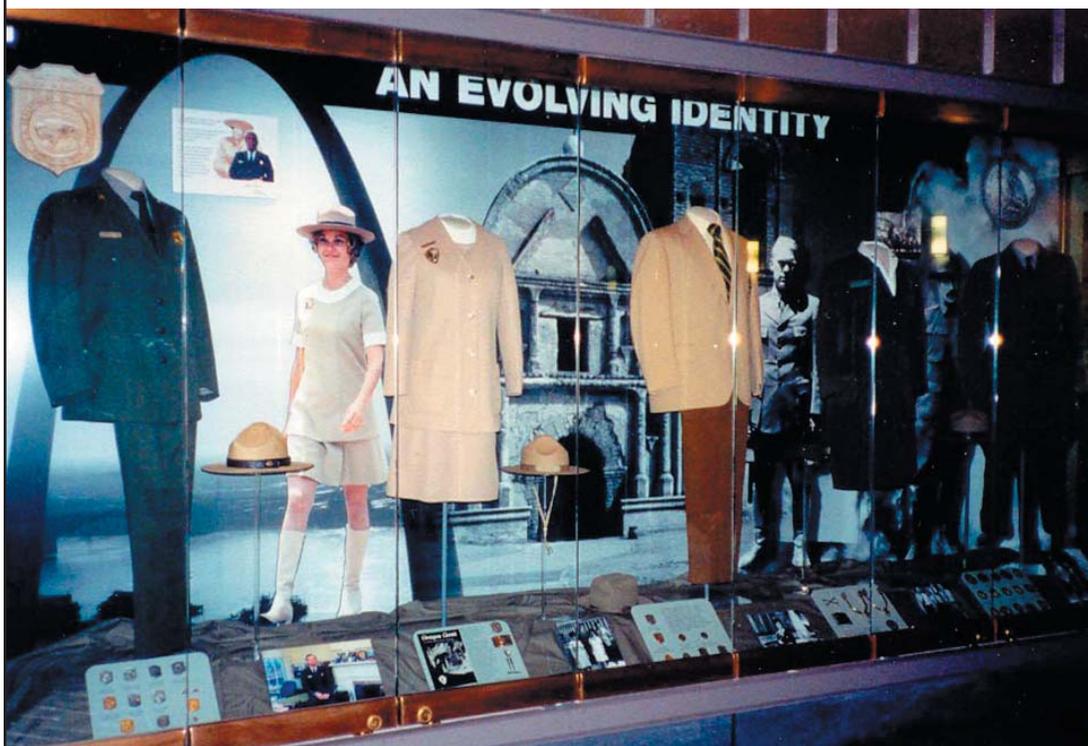
## Call for Career Collections



Items appropriate for inclusion in the National Park Service History Collection are still sought. They need to fit within the scope of the collection but uniforms, accoutrements, memorabilia, photographs, etc. associated with an individual’s NPS career are of interest. Such a “career collection” illustrates and documents an individual’s career, which may include the visual evolution of the uniform’s style during that time. The goal is to collect enough uniforms and associated material—from both men and women—to provide a strong cross section of the various duties found within the National Park Service. These “career collections” will be the focus of exhibits and celebrations for the 90th Anniversary (2006) and 100th Anniversary (2016) of the National Park Service.

Donations will be permanently incorporated in the National Park Service History Collection housed at Harpers Ferry Center. All items will be considered museum property and preserved as such. These collections will be used to honor and celebrate the NPS employee and the roll they have played in the development of the National Park Service. Please contact Sylvia Frye (phone: 304-535-6263; email: Sylvia\_Frye@nps.gov).

*Above: National Park Service Law Enforcement/Search and Rescue Career Collection. (Photo by David T. Gilbert)*



*Harpers Ferry Center curated this temporary National Park Service uniform exhibit at the National Conservation Training Center (NCTC) in Shepherdstown, West Virginia. The exhibit was on display from 2001–2004. (Photo by Sylvia Frye)*

and perhaps the only collection of its kind in the U.S. Government. Items in the collection include uniforms of all shapes and sizes, arrowhead patches, “Eagle” badges, Stetson hats, and various other uniform accoutrements. Frye still takes donations to the collection, filling in omissions and gaps to the long history of NPS uniforms.

### Career Collections

Frye is also working on “career collections” which focus on a series of uniforms a single employee would have worn through his or her NPS career. With the assistance of Rob Danno, Chief Ranger at C&O Canal National Historical Park, Frye has developed the first career collection to focus on Law Enforcement and Search & Rescue. Danno’s donated uniforms span 24 years of NPS service, and include Class A and Class B items, a SET Team Uniform, 2002 Olympic Ski Patrol Team Uniform, Tactical/Camouflage Uniform, Riot Gear, Bike Patrol Uniform, Desert Camo Guilly Suit, Snow Patrol Uniform, Swiftwater Rescue Suit, Wildland Fire Uniform, and SAR Flightsuit.

Another career collection has been acquired from Betty Knight, former Curator of the Alaska Region, which covers her 30-year career through the 1960s, 1970s, and 1980s. This collection is unique because it demonstrates three decades of dramatic style changes. New uniforms are also being added to the collection. Through the efforts of Ken Mabery and Ramie Lynch, former and current National Uniform Program Managers, HFC receives all “First Issue” uniform items before being released to the field.

The depth and breadth of the uniform collection now provides us with a unique opportunity to create a “type collection” of items that can be used by anyone interested in researching the history and development of the NPS. A “type collection”



comprises a collection of sample types (in this case NPS uniforms) that can be used as a reference tool from which decisions or identifications about additional collection items can be made.

### What Do Uniforms Teach Us?

What exactly can a uniform teach us? The most common lesson is the evolution of style. By concentrating on details like style features, brand names, fabric types, dye lots, and stitching techniques, one can learn about item quality, durability, functionality, and popularity of a particular style or manufacturer. Certain features can also verify a uniform’s age, such as the manufacturer’s tag, or the shape and depth of the scallops on a shirt pocket or collar. The evolution of the arrowhead patch also helps date a uniform, revealing subtle changes in color, stitching, detailing, and size over time.



*Top: Exhibit case in the National Park Service Director’s office. The park ranger is future President Gerald Ford, who served as a seasonal ranger at Yellowstone National Park in the summer of 1936.*

*Above: Permanent and temporary park rangers wore a flat, nickel-plated, one-piece badge of German silver.*



*Museum Curator Sylvia Frye proudly displays one of the earliest uniforms in the NPS collection, which dates to 1915. (Photo by David T. Gilbert)*

The uniforms also reflect societal change, especially during the 1960s and 1970s. This is particularly true for women, where fashion dictated uniform style over function. After World War II, for instance, women wore adaptations of the Women's Auxiliary Army Corps (WAAC) uniform until the early 1960s. This was followed in succession by the Airline Stewardess Pattern, the "stylish and chic" tan, and the green polyester uniform of the 1970s. Clearly, style took precedence over functionality or practicality for field work. With the exception of the short-lived "urban" uniform, the men's uniform was not significantly affected by society's influence.

Many more subtle lessons also lay hidden within the uniform collection. Frequent style changes, for instance, also represent the efforts the National Park Service has undergone in its search for an identity and to establish itself as an agency. The uniform, which includes the arrowhead patch, shield badge, and Stetson hat, has come to identify the ranger and is one of

the most visible symbols of the NPS today. The evolution of NPS identity is well documented in the evolution of uniform designs and styles.

### **Pride in the Park Service**

Butch Farabee, former Assistant Superintendent of Glacier National Park, wrote in 2001: "Recognized and respected the world over, the gold badge, uniform, and arrowhead make us special. They are ours and unite us all: interpretation, protection, and resource management. They bind us in our diversity, courage, and commitment to quality and garner respect from the public and our professional peers."

Today, the National Park Service uniform collection serves as a potent reminder of the hard work, dedication, commitment, and loyalty of thousands who endured endless hardships to develop the National Park Service that we know today. Most importantly, it is a powerful reflection of pride in ourselves, in our work, in our agency, and in our tradition.